

STATEMENT OF WORK (SOW)
Static Transfer Switches (STS) Program
6-4-2012

C.1.0 INTRODUCTION

The Federal Aviation Administration (FAA) has a requirement for the acquisition, and life cycle in-service support of the Static Transfer Switch (STS) Program. This Statement of Work (SOW) defines the FAA's requirements for life cycle integrated LOGISTICS (iLOG) technical support services for the STS.

C.1.1. BACKGROUND

The Federal Aviation Administration is currently acquiring Commercial Off-The-Shelf/Non Developmental Items (COTS/NDI) Static Transfer Switches. This COTS/NDI approach provides the FAA with the most efficient approach to acquire Static Transfer Switches. The STS functions as a selector between two sources of power to critical equipment.

C.1.2. SCOPE

This Statement of Work (SOW) defines the requirements for project management, configuration management, technical support services, test and evaluation, logistics support, training, and quality control for the STS and associated equipment being acquired. The Contractor must provide all necessary equipment; engineering; logistics support; maintenance/operator training; spares provisioning and maintenance program; and provide the documentation to support the acquisition of the STS and associated equipment.

C.2.0 APPLICABLE DOCUMENTS

C.2.1. SPECIFICATIONS, STANDARDS, and PUBLICATIONS

The Specifications Standards and Publications referenced are part of this SOW to the extent specified. In the event there are conflicts between FAA documents and industry standards, the FAA documentation shall take precedence. The following documents are in effect on the date as stated and form a part of this SOW and may be downloaded at <http://ato-p.se-apps.faa.gov/faastandards/FAADocs.htm>.

C.2.2. FAA ORDERS

FAA Order 1800.66	Configuration Management in the National Airspace System
FAA Order 4600.27	Personal Property Management
FAA Order 6200.4	Test Equipment Management Handbook
FAA Order 3000.57	Air Traffic Organization Technical Operations Training and Personnel Certification Programs

C.2.3. FAA STANDARDS

FAA-STD-021	Configuration Management, Contractor Requirements
FAA-STD-028	Contract Training Programs
AMAWI-00002	FAA Academy Training Development and Revision

C.2.4. INDUSTRY STANDARDS

EIA 649	National Consensus Standard for Configuration Management
ISO-9000	Quality Management and Quality Assurance Standards

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C.2.5. MILITARY SPECIFICATIONS (Used for Guidance Only)

MIL-PRF-49506 Logistics Management Information

MIL-HDBK-61 Configuration Management, Appendix A

C.3.0 REQUIREMENTS

The Contractor must furnish the necessary personnel, plant, equipment, facilities, materials, and other necessary resources to produce, test, and deliver the items described in this SOW. All such items must be supplied in conformance with the terms and conditions of this SOW and the complete contract, including references. The Contractor must execute the terms of this contract in accordance with individual delivery orders and be solely responsible for the management of its subcontracts.

C.3.1. PROGRAM MANAGEMENT

The Contractor must designate the Program Manager (PM) and Alternate Program Manager (APM). Once approved by the FAA, these individuals must interface with the Government and organize, schedule, and report on all elements of this contract. The PM and APM are designated as “Key Personnel.” The individual PM and APM must possess a minimum of one (1) year of program management experience with a contract of similar size and scope in a Government or corporate environment. The PM or APM, as necessary, must be the focal point within the Contractor’s organization for all required program efforts involving equipment orders, equipment documentation, quality control, logistics, and training. The PM must be prepared to discuss the status of contract activities with the Contracting Officer (CO) and Contracting Representative (COR). The Contractor must provide all of the necessary management, business and administrative planning, and coordination required to successfully perform all SOW tasking or associated task/delivery orders. The Contractor must also manage and administer submission of all data items required in each task/delivery order. Other functions considered part of Program Management are:

- Integrated Logistics Support (ILS), SOW Paragraph 3.4
- Contractor Depot Logistics Support (CDLS), SOW Paragraph 3.5
- Training, SOW Paragraph 3.6

C.3.1.1. PROGRAM PLAN **CDRL: M001 Program Plan**

The Contractor must provide its existing Program Plan, indicating the method in which the FAA’s work (equipment, logistics, and training) will be functionally integrated into the Contractor’s existing management structure.

C.3.1.2. PROGRAM MANAGEMENT REPORT **CDRL: M002 Program Management Report**

The Contractor must maintain a spreadsheet of equipment, training and service task orders indicating status of each. A soft copy of the report must be e-mailed to the FAA CO or COTR not more frequently than once per quarter.

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C.3.1.3.BAR CODE ASSET TRACKING SYSTEM CDRL: M003 Asset Identification Report

The Contractor must provide the FAA an Asset Identification Report for each STS and ATS delivered to the FAA, using a bar code that provides for each item to be named, described, identified, classified, and numbered (cataloged) in accordance with Section D, paragraph D.3.0, which provides detailed information on Bar Code Asset Tracking.

- Production Data Requirements.

1. The Contractor will support the FAA with a scanning initiative (defined below as FAA Scanning Process) for tracking production units from their point of shipment originating at the production and shipped to a Government facility. To support this effort, the Contractor will record the unit serial numbers in the FAA tracking format. The Contractor will also attach the tracking information to the shipment in a separate file. The Contractor must align the barcode scanning process to allow the interface with the FAA data collection system.
2. The Contractor must modify any existing processes to work with the FAA Scanning Process. The Contractor must support a pilot run of this FAA Scanning Process with FAA representatives to ensure data transfer takes place as intended. The Contractor may, as an option, accept as Government Furnished Equipment (GFE) a handheld barcode scanner and GFE software that creates the required xml files from scanning equipment off of the production line. If the Contractor elects to use the GFE process, the Contractor must have a scanner operator that can scan the equipment off of the production line and then send tracking information for outgoing shipments when they leave the dock.
3. The FAA has undertaken a scanning initiative as part of the Life Cycle Asset Tracking System (LCATS). While the following process has been generated by the FAA, the FAA does not consider the process to be significantly different from the processes contractors use as part of scanning and data collection activities for shipping and tracking. The Contractor will transfer the Asset Identification Report, **CDRL: M003**, containing shipment carrier name and shipment carrier tracking code and the shipment file name to which it relates to in a separate email to a designated FAA office when the shipment leaves the Contractor's factory dock or Warehouse. Refer to Section D, paragraph D.3.0.

C.3.1.4.CONFERENCE/MEETINGS CDRL: M004 Meeting Agenda; CDRL M005 Meeting Minutes

The Contractor must prepare and deliver to the Government an Agenda (CDRL M004) five (5) working days prior to each scheduled conference, review or meeting, and meeting minutes (CDRL M005) within five (5) working days after each scheduled conference, review and meeting. Contractor administrative support must be provided for meetings and conferences at a Contractor facility. Such support may consist or providing facilities, office equipment, and clerical support. All meetings and conferences held at the Contractor's facility means a facility located in the Continental United States (CONUS). Travel by Contractor's personnel to meetings and conferences in locations other than Contractor's facility, or the

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Contractor's city or local metropolitan area, are reimbursable in accordance with (IAW) the FAA's Travel Policy (FAATP).

C.3.1.4.1. POST AWARD CONFERENCE

The Contractor must participate in a Post Award Conference (PAC) to be held at the Contractor's facility or a location determined by the CO. The conference will be scheduled no later than 30 days after contract award. The purpose of the conference is to thoroughly review the contract to ensure that all parties have a clear understanding of all contractual requirements. The Program Management, Logistics Guidance, initial Contractor Depot Logistics Support (CDLS), and Training Guidance Conferences may be held concurrently with the PAC; or, at the discretion of the Government, held on separate dates and locations.

C.3.1.4.2. PROGRAM MANAGEMENT REVIEW (PMR)

The Contractor must conduct Program Management Reviews (PMRs) to review the contract status in terms of performance and schedule at the request of the Government. The CO or the COTR must notify the Contractor at least 30 working days in advance of all required PMR briefings, reviews, and agenda items. All program review dates will be determined by the CO or COTR designated representative. The Contractor must propose an agenda to the Government for review and approval for each PMR no later than 15 days prior to such PMR. The Contractor must prepare minutes and action item list in support of all PMR meetings.

C.3.1.4.3. TECHNICAL INTERCHANGE MEETINGS (TIMs).

The Contractor must support and participate in TIMs. The purpose of these meetings is to promote a free exchange of ideas between the Contractor and the Government in order to identify and resolve technical problems. The Contractor must provide the appropriate subject matter experts in order to respond to Government questions. The Contractor and FAA will coordinate the best location for the meetings. Meetings will be coordinated with the COTR and approved by the CO. Teleconference meetings may be held in lieu of travel. The CO must notify the Contractor of the Government's readiness at least 15 working days in advance of each TIM. The Contractor must propose an agenda to the Government for review and approval for each TIM no later than 5 days prior to each TIM. The Contractor must prepare minutes and action item list in support of all TIMs.

C.3.1.4.4. PROVISIONING GUIDANCE CONFERENCE

The Contractor must participate in an FAA-sponsored Provisioning Guidance Conference. The provisioning conference is required to determine onsite and depot-sparing levels. The initial conference must convene within 20 working days of contract award and may be held concurrently with the post award conference. Subsequent provisioning conferences may be scheduled at the discretion of the Government to resolve any supply support issues that may arise during the contract period of performance.

C.3.1.4.5. INTEGRATED LOGISTICS SUPPORT MANAGEMENT TEAM (ILSMT) MEETING

See Section C.3.4.1.3

C.3.1.4.6. CONTRACTOR DEPOT LOGISTICS SUPPORT MANAGEMENT REVIEW (CDLSMR)

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See Section C.3.5.3

C.3.1.4.7. TRAINING. POST-AWARD TRAINING CONFERENCE AND TRAINING REVIEWS (TR)**See Section C.3.6.5.1**

C.3.1.5. QUALITY CONTROL PROGRAM CDRL: Q006 Quality Assurance Plan

The Contractor must provide a Quality Assurance Plan (QAP) for the design, development, evaluation, and furnishing of hardware, software, firmware supplies, services, and associated documentation (including any modification to existing hardware and software). The plan must integrate the FAA's quality control needs into the existing practices without developing a new quality assurance program. The Contractor must conduct its quality assurance program in accordance with the approved QAP.

C.3.1.6. CONFIGURATION MANAGEMENT CDRL: Q007 Contractor's Configuration Management Plan

The Contractor must incorporate the FAA Configuration Management requirements into their established configuration management program and reporting system. The Contractor's in-place Configuration Management Program will be augmented with FAA Order 1800.66. Further guidance may be obtained from EIA-649, FAA-STD-021 and MIL-HDBK-61, Appendix A. The Contractor must describe their process for configuration identification, configuration control, configuration status accounting, and configuration audits. The Contractor must establish a configuration control board that includes FAA representation. Equipment changes are not authorized without FAA approval. The Configuration Management Plan describing the Contractor's Configuration Management Program must be submitted for approval within 30 working days of contract award. The PM must be the point of contact for all communications on Configuration Management related issues.

Configuration Identification: The Contractor must have a system to identify Hardware Configuration Items (HWCI), Computer Software Configuration Items (CSCI), and Firmware associated with each STS and Automatic Transfer Switch.

- Configuration Control:
 1. The Contractor will notify the CO of any anticipated or scheduled changes to HWCI, CSCI, Firmware, or documentation associated with the STS and associated equipment using the Contractor's established configuration management notification system. The Contractor must notify the CO via a Formal letter of any "Field Service Bulletins" associated with any Static Transfer Switch procured for the FAA as addressed in paragraph 3.5.7.1 Contractor Depot Logistics Support (CDLS). Access to the information contained within a Field Service Bulletin must be available from the contractor's electronic bulletin board, if available. The Contractor must provide all information and Government Intellectual Property (IP) at no cost to the Government in the event of contract termination.
 2. The Contractor must notify the FAA if new equipment, different than the equipment listed on the Bill of Materials, needs to be used for the Static Transfer Switches and

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Automatic Transfer Switch. The FAA will determine if testing of the new equipment is required.

- Configuration Status Accounting: The FAA will utilize the Contractor's Configuration Status Accounting (CSA) system must include the recording and reporting of baseline data, changes to configuration controlled items and any other items identified in the Configuration Management Plan. CM changes applicable to the STS and associated equipment at FAA sites must be reported to the FAA within ten working days of Contractor engineering changes.

C.3.2. SOFTWARE QUALITY ASSURANCE.

The Contractor must develop and implement a software quality assurance program aimed at comprehensively eliminating software bugs. All functions must be tested on a software simulator by someone different than the person responsible for the original code or any subsequent changes. The Contractor must also develop and implement an organized plan for ensuring all previous software corrections or enhancements developed for previous clients have been incorporated in this project. Configuration management processes must be capable of identifying code changes and software revision levels. Proper functioning of the software must be demonstrated on a simulator. The Contractor must provide a copy of their ISO 9000 series certification documentation to support compliance of the above Quality Assurance requirements.

C.3.3. COMMERCIAL OFF-THE-SHELF EQUIPMENT

The STS must consist of Commercial-off-the-Shelf /Non-Developmental Item (COTS/NDI) equipment conforming to requirements in "Static Transfer Switch (STS) equipment Specification (STS SPEC)" found in the Section J, Attachment J.1, of this contract.

C.3.3.1. SOFTWARE, FIRMWARE AND DOCUMENTATION COPYRIGHT, DEVELOPMENT AND LICESNSE RIGHTS:

C.3.3.1.1. REMOTE MONITORING SOFTWARE CDRL: E008 Monitoring Software/Firmware Documentation.

The Contractor must develop and provide Government access to STS, Automatic Transfer Switch (ATS), and associated equipment Remote Maintenance Monitoring (RMM) interface software information. This contractor software interface documentation will be used by the Government to develop FAA RMM software that interfaces to the Static Transfer Switch controller.

C.3.3.3. EQUIPMENT IDENTIFICATION AND MARKING

C.3.3.3.1. BAR CODE ASSET TRACKING SYSTEM.

The Contractor must ensure that each STS and ATS delivered to the FAA has a bar code identifying the item in accordance with the FAA approved Bar Code. STS units will be named, described, identified, classified, and numbered (cataloged) in accordance with Federal Property Management Regulations, specifically Personal Property Management, FAA Order 4600.27A and the FAA Asset Identification Process and Procedure Guide. The Contractor must provide valid national stock number(s) (NSN) for STS units at acquisition. If no NSN has been assigned to an item, the Contractor must provide sufficient

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descriptive data to obtain NSN(s) from the Defense Logistics Information Service (DLIS). Refer to Section D, paragraph D.3.0.

C.3.3.6 FIRST ARTICLE TESTING

The Contractor must perform STS First Article testing when directed by the Government. First Article testing must be in accordance with "Static Transfer Switches (STS) Specification (STS SPEC)" found in the Section J, Attachment J.1, Paragraphs 3.2, of this contract.

C.3.3.6.1 STATIC TRANSFER SWITCH TEST CONFIGURATION

STS test configuration comprises all features in accordance with Section J, Attachment J.1, Paragraph 1.1. The STS equipment and ancillary equipment to be tested will be purchased by the Government using the CLINS in Section-B of the contract.

C.3.3.6.2. TEST

As directed by the FAA, the Contractor must perform First Article Testing in accordance with STS SPECS found in the Section J, Attachment J.1 paragraph 3.2. The Contractor will provide facilities, personnel, and test equipment to perform the verification test. It is understood that the Contractor's STS may not meet all operational criteria, performance parameters, and physical characteristics as specified in the STS SPEC, Attachment J.1; however, the equipment tested must conform to the equipment's declared performance and operational parameters, and physical characteristics submissions. Therefore, any STS SPEC references are referring to the equipment's declared performance in Attachments J.12 and J.13 and STS and equipment physical characteristics declared in Attachment J.14.

The Contractor must be prepared to test the Static Transfer Switches within twenty-eight (28) calendar days following written notification of Contracting Officer. The Contractor must schedule at least two (2) workdays for each STS visual inspection and test. The contract award is contingent upon the Contractor's equipment passing the First Article Test described in Section J, Attachment J.1 paragraph 3.2. If the equipment fails after the first test, the Contractor must replace the failed component(s) and test the STS again. If the Contractor's equipment fails the second test, the contract will be terminated upon notification by the CO. The FAA will then determine which of the other Offerors provide the best value to the Government.

C.3.4. LOGISTICS

C.3.4.1 INTEGRATED LOGISTICS SUPPORT (ILS)

The Contractor must plan, manage, and execute an Integrated Logistics Support (ILS) program that addresses all elements of integrated logistics identified in this SOW.

The objective of the ILS Program is to execute and integrate support tasks to ensure the Static Transfer Switch program is fully supportable throughout its life cycle. The Contractor must support the FAA ILS Program by performing the tasks included in this section of this SOW.

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C.3.4.1.1. ILS PROGRAM PLANNING CDRL: L009 Integrated Support Plan

The Contractor must establish and manage an integrated product support program which provides integrated logistics support for the STS program. The Contractor must conduct the Integrated Logistics Support Program in accordance with an FAA approved Integrated Support Plan (ISP). The ISP must detail the Contractor's plan for managing the ILS program for the program life cycle. The ISP will include the Contractor's Logistics Management Information (LMI) plan. The Contractor may demonstrate compliance with the above requirement by providing the Government with either the applicable portions of their ISO 9000 series certification documentation or internal corporate documentation that support both the scope and intent of the ISP, as described in Data Item Description (DID) DI-FAA ISP-L001. The Contractor must update the FAA approved ISP or the FAA approved applicable portions of their ISO 9000 series documentation or internal corporate documentation to reflect approved changes emanating from program changes, reviews, and other actions affecting the integrated logistics aspects of this program and must deliver the updated ISP/ISO 9000 series documentation or internal corporate documentation to the Government on an as required basis in accordance with the Contractor's normal update process. The Contractor's Logistic Support Program must be developed to support the following maintenance concept:

- FAA technicians will perform all of the tasks that the Contractor's Customer Service Engineer or Field Service Engineers perform during an assistance visit to a customer site(s). Tasks must include, but are not limited to, inspection of equipment, troubleshoot/diagnosis to fault, removal of failed parts/LRU(s), replacement of failed parts/LRU(s) and validation and certification (if applicable) that the STS is operational and available for operation.
- The level of documentation and training provided to FAA technicians must therefore be commensurate to that of the Contractor's Customer Service Engineers or Field Service Engineers.

The Contractor shall be responsible for ensuring that all sub-contractors and vendors comply with the ISP requirements.

C.3.4.1.2. ILS MANAGEMENT

An ILS Program will enable the Government to support operational STS and their associated equipment. In support of the ILS Program, the Contractor's PM or existing ILS Manager must ensure that integrated logistics considerations and integrated logistics planning are integrated into the STS Program and associated equipment engineering. The ILS Manager is responsible for:

- Establishing tasks and milestones for planning, developing and validating logistics support.
- Planning and coordinating the efforts of the following functional logistics elements and activities:

1. Maintenance Planning

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2. Technical Data/Documentation
3. Supply Support
4. Support and Test Equipment
5. Maintenance Support Facilities
6. Direct Work Maintenance Staffing
7. Training and Training Support
8. Computer Resources Support
9. Packaging, Handling, Storage, & Transportation
10. Tracking equipment obsolescence and providing notification with recommendation
11. Tracking failures during installation

- Coordinating integrated logistics inputs to, and outputs from, the Government's ILS Manager, ILSMT, subcontractors/vendors and the Contractor's internal management, engineering, manufacturing, financial, reliability, maintainability, quality control, field services, and contracts administration organizations.

C.3.4.1.3. ILS MANAGEMENT TEAM

A joint Government/Contractor sponsored ILSMT for the STS Program must be established to serve as the primary management vehicle for coordinating and monitoring the integrated logistics support contract performance ensuring adequacy, timeliness, and compliance with contractual requirements.

The Chairperson for the ILSMT will be the FAA Logistics Manager or his/her appointed representative (CO or COTR). As requested by the Government, the Contractor's representative(s) must participate as a member(s) of the ILSMT. ILSMT conferences will be held on an as needed basis to discuss program anomalies. The first ILSMT conference is in conjunction with the PAC and CDLS Management Review conference. These conferences may be held at the Contractor's facility, FAA Headquarters, or other facilities, as designated by the CO. Whenever possible, these conferences may be held in coordination with other meetings/conferences (e.g. Program Management Reviews). Meeting support must include formulation/ submission of agenda items, CDRL: M004 Conference Agenda, reports of the Contractor's Integrated Logistics Support work, administrative support, and attendance by Contractor personnel considered necessary by the Contractor. The Contractor must provide administrative support for meetings. Such support shall consist of, but is not limited to, providing meeting/conference room, access to telephones, copy, and facsimile equipment, and clerical support for the recording and preparation of meeting minutes CDRL M005 Conference Minutes. The Contractor must ensure participation of subcontractor(s).

C.3.4.1.4. LOGISTICS GUIDANCE CONFERENCE

The Contractor must participate with the Government representatives in a Logistics Guidance Conference (LGC) to be held at the Contractor's facility, as ordered by the Government. The LGC must be not later than 30 working days after Contract Award in conjunction with PAC. The

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Contractor must co-chair the meeting with the FAA Logistics Manager. The Contractor must present a LGC briefing to detail the Contractor's approach to accomplishing integrated logistics tasks in accordance with this SOW.

C.3.4.2 SUPPLY SUPPORT

C.3.4.2.1. RECOMMENDED SPARE PARTS LIST (RSPL) CDRL: L010 Recommended Spare Parts List

The Contractor must provide a recommended site and depot spare parts list for all STS units and associated equipment ordered under this contract. This list will be subject to review, modification, and approval by the Government. When ordered, by the Government, the approved spares must be packaged separately and shipped as ordered to the order destination.

C.3.4.2.2 SITE SPARE PARTS LIST CDRL: L011 Site Spare Parts List (SSPL)

The Contractor must provide a Site Spare Parts List (SSPL) for all STS units and associated equipment ordered under this contract. The SSPL is a subset of the Recommended Spare Parts List. This list will be subject to review, modification, and approval by the Government.

C.3.4.2.3 SUPPORT EQUIPMENT CANDIDATE LIST (SECL) CDRL: L012 Support Equipment Candidate List

The Contractor must develop a SECL package that includes all support equipment/test equipment both common and special, required to inspect, test, calibrate, service, and repair the STS and associated equipment at the installation site. The support equipment must also be listed on the Calibration Cycle Requirements Table of Appendix 1 of Order 6200.4. The SECL is comprised of common and special equipment.

- Common SECL items: Tool sets and test equipment available from multiple suppliers, such as metric and standard tool sets, volt-ohm-milliamp meters.
- Special SECL items: Vendor specific tools; tools sets; meters; Human Machine Interface (HMI) device(s) and the software required by the HMI to inspect, test, calibrate, service, and repair the STS and associated equipment at the installation site.

This list must include only the tools and test equipment required to perform authorized site maintenance tasks (e.g., fault isolation and replacement to the LRU level). The Contractor must ensure that the SECL data on the list agrees with the Contractor's STS technical documentation. This list will be subject to review, modification, and approval by the Government. The Contractor must provide the Government updates, as appropriate or as requested by the FAA.

C.3.4.2.4 SPARE-PARTS PECULIAR CRDL: L011 Spare-Parts Peculiar List

The Contractor must deliver a Spare Parts Peculiar List and all items specified as part-peculiar in a Contractor determined format.

C.3.4.2.5 DEPOT SPARES

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After the provisioning conference, the Government may order depot spares. The Contractor must package and ship the depot spares to the CDLS facility and FAA facilities upon receipt of order.

C.3.4.3 MAINTENANCE

C.3.4.3.1 WARRANTY AND NON-WARRANTY REPAIRS

The Contractor shall furnish Warranty and Non-Warranty repairs in accordance with the provisions of this section for STS repairable items. The Contractor shall have the capability and expertise necessary to repair all repairable items and components.

C.3.4.3.1.1. WARRANTY REPAIRS

The Contractor shall clearly define their warranty (to include both parts and labor) for all STS and associated equipment, spare parts, and services ordered by the FAA under this contract. This will enable the FAA Program Office and the FAA Logistics Center (FAALC) to correctly process requests for equipment, spare parts and for services and to accomplish their management, tracking, and payment approval tasks.

C.3.4.3.1.2. NON-WARRANTY REPAIRS

The Contractor shall clearly identify non-warranty repairs that apply to each STS unit and associated equipment that is determined not to be under warranty.

Under this concept, the FAALC will manage the depot repair program and store exchange and repair (E&R) spares to support STS units.

The Contractor shall furnish all qualified labor, supervision, materials, equipment, tools, appliances, and services to repair components of the equipment, to include the special tools and test equipment delivered by the Contractor to support the equipment.

Repairable items and components will be shipped prepaid to the Contractor facility for repair from either the FAALC or the STS site. The FAALC Item Manager will furnish shipping instructions for repaired items. The Contractor's return of repaired items and components must be free on board (FOB) destination.

The Contractor shall restore LRUs in such a manner so as to restore them to a serviceable operating condition and must meet the performance requirements of the Product Descriptions.

- Contractor repair procedures shall include the following:
 1. Cleaning, visual inspection, bench tests, and fault isolation;
 2. Disassembly as necessary to identify and accomplish required repairs or to establish the item as serviceable;

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3. Reassembly, calibration, functionality testing, acceptance inspection, and preparation for shipment; and
 4. All repaired LRUs must successfully undergo Production Unit Testing (PUT) prior to being returned to the Government.
- When the Contractor determines that an item cannot be repaired, the Contractor must promptly notify the CO and submit rationale for that determination. If the CO agrees that an item cannot be repaired, the CO will provide disposition instructions for the item to the Contractor. If the CO determines the item is a candidate for repair the Contractor will be directed to locate a repair resource.
 - All repairs shall be made in accordance with the Contractor's established shop methods and procedures developed for the STS and associated equipment.
 - The Contractor shall complete any Government approved modification to items required under this contract and not previously accomplished at the time of repair. Each modified item or LRU must meet form, fit, and function of the item that it replaces and be two-way interchangeable, e.g. unmodified items shall operate in place of modified items and modified items must operate in place of unmodified items.
 - The Contractor shall be responsible for the initial lay-in of piece parts and for obtaining replenishment units and spare piece parts required for use in the repair of failed items. These parts shall remain the property of the Contractor until incorporated into the repaired items at which time they become Government property. All parts removed during repair become the property of the Contractor.
 - The transportation costs for STS repair parts determined to be non-warranty repairs will be reimbursed to the Contractor.
 - The turn-around-time for repair of the non-warranty repairs must be the same time as warranty repairs (See Clause H.3 (e)) after receipt of a response from the CO.
 - Upon receipt of a failed LRU from an FAA site, the Contractor must induct the LRU for repair.
 - The Contractor must maintain the attached FAA Form 4650-12 with the failed LRU.
 - The Contractor must ship the repaired LRU to the FAALC with a clean copy of the FAA Form 4650-12, Fed Express shipping label, and instructions inside the container within the contractual turn around time (TAT).
 - The Contractor must fax a copy of the FAA Form 4650-12 to the CO and provide supporting information in sufficient detail to prove that the cause of the failure was due to accidental damage by the FAA, tampering or modifying the item or if an asset is found to

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be serviceable cannot duplicate failure (No Fault Found), or a damage caused by Act of God.

- Should a defective LRU be determined to be out of the scope of the warranty repair by the Contractor, the Contractor must provide a fixed repair cost to the CO to determine if the LRU is to be returned to warranty status.
- In the event a repair is required to return a defective LRU back into warranty status, the Contractor must bill the Non-Warranty Repair for the repair costs.
- The Contractor must prepare their Packing List/Shipping Report/Invoice to include the following information the Contract Number, Report Control Number, Serial Number, Item Description, and National Stock Number for the FAALC receipt of a repaired LRU.

C.3.4.3.2 STATUS REPORTING

The Contractor must develop the Monthly reports in Microsoft Excel © format. The Contractor must provide one copy each of monthly and cumulative status reports to each of the following Government officials:

- a. Contracting Officer
- b. Contracting Officers Technical Representative
- c. FAALC Item Manager

C.3.4.3.3 MONTHLY REPAIR STATUS REPORTS CDRL: L013, Repair Status Report.

The Contractor shall submit to the CO Monthly Repair Status Reports no later than 10 calendar days following the month data was collected, and must contain the following information:

- a. Monthly E&R LRU Reports
 - 1. item description
 - 2. serial number
 - 3. control number
 - 4. narrative description
 - 5. date replacement shipped to FAA facility
 - 6. facility location (should show as Header on report vice Customer name)
 - 7. date faulty repairable received from facility
 - 8. identify as warranty or non-warranty repair
 - 9. identify "Cannot Duplicate" failures
 - 10. "elapsed" time of the unit

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b. Cumulative total number of E&R items shipped (in part number sequence) including the following information:

1. part number
2. cumulative quantity shipped
3. cumulative quantity of "Cannot Duplicate" failures
4. total number of repairs on the same item (in part number sequence)

c. Cumulative total number of "cannot duplicate" failures by part number and facility:

1. facility
2. part number (in sequence)
3. cumulative quantity "cannot duplicate"

d. Cumulative total number of warranty and non-warranty repairs.

C.3.4.3.4 CONTRACT COSTS REPORTS CDRL L014: Contractor Depot Logistics Support (CDLS) Cost Report

The supply support, technical assistance, and contract cost reports must contain information on technical assistance; items and components issued during the reporting period together with the cumulative information indicated for each Fiscal Year; and will include all CDLS contract costs.

C.3.4.4 TECHNICAL SUPPORT SERVICES

The Contractor must provide technical support services as requested by the CO. This service must support the Program Office, FAALC, FAA Academy, FAA Second Level Engineering Support, and FAA Engineering Field Support. This support will be provided through the Task Order process. The Contractor must respond within 24 hours of receipt of a request for assistance by the Government. Such support must consist of the following:

a. Engineering support services include as a minimum: operation and maintenance of the STS, equipment problem resolution, resolution of interface problems, and operational certification.

b. Hardware maintenance support services including hardware maintenance, repair, restoration, validation, verification, and supply support. The Contractor must replace or repair all failed LRUs.

c. Other Contractor support including, Configuration Management Plan, Integrated Support Plan, Training Materials, and other contractor documentation provided with their proposal.

C.3.5 CONTRACTOR DEPOT LOGISTICS SUPPORT (CDLS)

If ordered by the Government, the Contractor must furnish all qualified labor, supervision, materials, piece parts, equipment, tools, and services required to perform depot-level repair of system hardware, software and ancillary equipment at the Contractor's facility, and include shipment from the Contractor's facility(s) to Government installations nationwide.

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C.3.5.1 CDLS GENERAL

This section defines requirements for CDLS program management, development and delivery of documentation and planning efforts for the CDLS service to support the FAA STS and associated equipment ordered under this contract, for the period of this contract. The Contractor furnishes all required labor, facilities, materials and equipment (except GFE) required to provide depot level repair and supply support.

C.3.5.2 CDLS PROGRAM MANAGEMENT

The Contractor must assign dedicated employees to manage the CDLS Program requirements as described in this SOW, and the guidance set forth in Contractor Depot Logistics Support (CDLS) System User Guide, Attachment J-19. The CDLS Program Manager (PM) must be assigned the responsibility for control and coordination of all work performed. The PM must have sufficient experience and authority to ensure efficient and timely program execution. The PM must be the single focal point within the Contractor's organization for all program work. The Contractor's PM must be required to respond to contract status requests within 1 working day following a request from the FAA CO or COTR.

C.3.5.3 CDLS MANAGEMENT REVIEW (CDLSMR)

The Contractor must hold one post award CDLSMR conference in conjunction with the Post Award Conference and with the ILSMT Conference, to review/resolve supply support problems, technical assistance problems/concerns, cost and schedule issues, and other CDLS issues as requested by the Government. Thereafter, the CDLSMR must be held concurrently with the PMR or at the discretion of the Government.

C.3.5.4 CDLS REQUIREMENTS CDLS L015: Depot Level LRU and Associated Equipment Parts Usage List

The Contractor must provide CDLS support for the FAA STS and associated ancillary equipment purchased throughout the contract period. This service must commence with the expiration of warranty for each Static Transfer Switch purchased. This entails complete supply support which includes issuing serviceable hardware Lowest Replaceable Units (LRU), technical documentation, field service bulletins, software, firmware, and spare LRUs for Static Transfer Switches purchased throughout the contract period. LRUs are normally categorized as expendable. In the event an Exchange and Repair (E&R) or Repair and Return (R&R) part can be repaired for less than 50% of the current price, assuming the items price is

\$600 or above, the part must be repaired. If the repair cost is over 50%, the part will be deemed expendable with COTR or CO concurrence. If an item is at risk of being obsolete, then expendability rests with the COTR. The Contractor must adhere to the shipping response times in paragraph 3.5.4.4 (CDLS Delivery Requirements) for stocked items purchased throughout the contract.

The Contractor must furnish all labor, tools, test equipment, spares, parts, software, and any other technical or administrative support necessary to provide the required CDLS. The Contractor must develop a complete **CDRL L007: Depot Level LRU and Associated Equipment Parts Usage List** (including GFE spares, if any). The FAA will participate in the list development, and will approve the range and depth of all CDLS spares. The Contractor must update this list, in response to modifications to the Contractor's commercial product, modifications to procedures required to inspect, test, calibrate,

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service, and repair the STS and associated equipment at the installation site, or changes made to the contract CLINs that introduce new variations of equipment into the FAA inventory and submit it to the FAA for approval. This list must include Original Equipment Manufactures (OEM) part numbers, long lead items, and notification of obsolete part numbers, and their replacement. The Associated Equipment Parts List will also identify piece parts that are sub-LRU level, when ordered by the FAA.

C.3.5.4.1 SPARES STORAGE WAREHOUSE

The Contractor must furnish a 1000 square foot storage warehouse to meet CDLS stocking requirements. This storage space must be established to facilitate the rapid deployment and temporary storage of piece parts and associated equipment for field repair requirements. The Contractor will monitor usage (MTBF), long lead, and obsolescence and stock accordingly. The CDLS warehouse space must be a secure area with access door(s) sized to allow free movement of Static Transfer Switch equipment and accessories through the portal. Only personnel authorized by the PM or COTR are permitted within this secure area.

C.3.5.4.2 WEB-BASE REQUISITION INTERFACE PROCEDURES

The Contractor will utilize the FAA Logistics Center (FAALC) CDLS Interface (CDLS Web). All requisitions will be directed to the Contractor's Point of Contact (POC) by means of Web-based copy of the requisition. The Contractor will complete all appropriate interface data fields; provide the required asset and asset return information, as well as any associated shipping information on a daily basis.

The Contractor will monitor the Web-based tool for requisitions during standard working hours, as defined as 08:00 – 4:30 CST, Monday – Friday, excluding Federal Holidays. The Contractor will provide the designated points of contact, by name and telephone number, who can be contacted at any time in the event that immediate shipment of an asset to a site is required at any time outside of the listed standard working hours.

The Contractor will receive returned assemblies from the sites and will record information regarding the returned item in the Web-based requisition interface tool, to include originating site, LRU, and shipping information.

C.3.5.4.3 CDLS DEFINITIONS

The following definitions are applicable:

1. Lowest Replaceable Unit (LRU): An essential support item which is removed and replaced at field level to restore the end item to operationally ready condition. The Contractor must procure Components/Piece parts required to support the repair of a returned LRU.
2. Serviceable Item: The condition of an item in a good state of preservation that can be placed in service in accordance with applicable manufacturer's overhaul limits and instructions and/or pertinent regulations of the FAA without repair.
3. Expendable Item: Any hardware LRU that can be removed and replaced to restore the system. An expendable LRU possesses characteristics, qualities, and low cost that makes it uneconomical to restore the defective LRU. The Contractor must procure expendables to support the repair and

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restoration of the CDLS systems supported. Expendables must be identical in form, fit and function to the original item.

4. Consumable Item: Any item that can be removed and replaced to restore the system. A consumable item is a low cost, non-repairable item such as fuses, light bulbs, knobs, resistors, wire, battery terminal lugs, etc.

5. Exchange and Repair: Any hardware LRU, except expendable/consumable that when failure occurs, beyond the capability of the site technician, is returned to the Contractor after a serviceable item is received on-site. The designation of an item of supply as E&R indicates the logistics status assigned for inventory management purposes rather than the physical condition of an item. A serviceable item is sent from the Contractor to a FAA field facility upon request by the FAA Logistics Center (FAALC) Item Management (IM) Specialist; and an unserviceable item is returned to the repair facility (Contractor) in exchange for the serviceable item, unless otherwise authorized.

6. Repair and Return: Any hardware LRU, except expendable/consumable that when failure occurs, beyond the capability of the site technician, is returned to the Contractor for repair and return to the facility due to item not available from stock or cannot be procured in sufficient time to satisfy the requirement.

7. Test: A test or check of equipment in its operational (or functional) environment, using equipment, procedures, and limits specified in applicable authorized manufacturer publications, manuals, specifications, and technical orders, or FAA authorized changes in procedures and limits.

C.3.5.4.4 CDLS DELIVERY REQUIREMENTS

The following priorities must apply for delivery of all items. The designation of priority delivery must be made by the assigned FAALC IM. The Contractor must ship parts with the FAA priorities system, as defined below.

Priority 1: This priority is required when an extreme emergency condition exists. The situation (as judged by the supervisor or appropriately designated representative) is such that an extremely critical emergency situation exists; which, if not corrected, has the very high potential for creating a real and present danger to the flying public. It will be used when either the prime or standby equipment is inoperative or when a facility is operating at reduced performance that adversely affects air traffic control operations. Shipment to the designated facility is to be made within twenty-four (24) hours after receipt of notification to the vendor by the FAALC IM. The Contractor is required to meet the delivery requirements associated with each requisition shipping priority for replacement spares and repair parts.

Priority 2: This priority is required when an emergency condition is determined to exist. This condition exists when a facility is operating with substandard equipment or other operating conditions indicate an imminent facility failure or outage. The situation (as judged by the supervisor or

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appropriately designated representative) is such that a critical emergency situation exists; which, if not corrected, has high potential for creating a real and present danger to the flying public or a disruption to the safe and expeditious flow of the nation's air traffic. Shipment to the designated facility is to be made within 48 hours after receipt of notification to the vendor by the FAALC IM.

Priority 5: This is a routine requirement or stock replenishment. Shipment to the designated facility is to be made within 8 business days after receipt of notification to the vendor by the FAALC IM. Except as authorized herein, requisitions placed on the FAA Logistics Center by operational NAS maintenance facilities, agency administrative offices, etc., should be placed using a P-5 requisition designation. Under unusual circumstances, listed below, it may become necessary to obtain support using other than a P-5 requisition.

Contractor must provide a 24/7 contact point. Name, phone number, FAX number, and pager number must be provided as a point of contact. The Contractor must fax or e-mail a shipping confirmation to AML-4010/4060.

C.3.5.4.5 CDLS TECHNICAL AND ADMINISTRATIVE SUPPLY SUPPORT ASSISTANCE

The Contractor must provide hardware, software, and firmware technical assistance to the FAA (AJW-223 and AML-4010/-4060 organizations) as directed by the FAA CO/COTR, for technical documentation, engineering, operational, logistical supply support, and maintenance support of hardware and software/firmware not already included elsewhere in the contract. At a minimum such technical assistance must consist of the following:

- a. Establishment of a telephone service which provides technical experts who are fully prepared and equipped to provide guidance to FAA personnel in resolving engineering requests, operational support, logistical supply support, maintenance support and special design for adverse conditions.
- b. Once a request is made, the Contractor's technical experts must respond to the request within four (4) working hours from the time that the request is received.
- c. This assistance shall be provided from 8:00 AM to 5:00 PM Central Standard/Daylight Time, Monday through Friday (this support is not required on Federal Holidays).

C.3.5.4.6 SHIPMENT OF CDLS ITEMS FROM CONTRACTOR TO GOVERNMENT FACILITY OR GOVERNMENT FACILITY TO CONTRACTOR

Upon request by the Government, the Contractor must ship a serviceable item to the designated Government field facility. Shipping priority for those items must be furnished by the assigned FAALC IM through the CDLS Web site. The Contractor will provide a Returned Material Authorization (RMA) number with the asset if the item requires return to the Contractor for repair or evaluation. Transportation charges must be listed as a separate item on all invoices. If the items' shipping charges for any one destination exceed \$100, a copy of the waybill must be provided with the invoice. Method of shipment

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must be commensurate with the designated priority of the requirement and may be specifically designated by the assigned FAALM IM. Contractor must use a traceable means of shipment.

C.3.5.4.7 CDLS PACKAGING, HANDLING, STORAGE AND TRANSPORTATION

Refer to Section D, paragraph D-1, for detailed information on CDLS Equipment Preservation, Packaging, and Packing.

C.3.5.5 LOGISTICS MANAGEMENT INFORMATION CDRL L016: Logistics Management Information (LMI) Data Products Worksheet

The Contractor must deliver to the Government the data products contained in the **CDRL L008:, Logistics Management Information (LMI) Data Products Worksheet**. The data products must represent the system design configuration including systems, subsystems, components, assemblies, subassemblies, support and test equipment, and training equipment.

- a. The Contractor must provide LMI data to the LRU level for all COTS, modified COTS, NDI, and developmental items.
- b. Data for temporary items are not required.

The Contractor must adhere to the data definitions, and data formats as described in FAA Acquisition Management System (AMS) and Appendix B, MIL-PRF-49506, the attached LMI Data Products worksheets, and the Product Format. The Contractor must develop and deliver a LMI Plan, in contractor format; as an attachment to the ISP. The LMI plan must detail the Contractor's plan for performing the logistics requirements specified in this contract.

The Contractor must make maximum use of previously collected and analyzed data, and documentation prepared for COT/NDI hardware/components whenever possible.

C.3.5.5.1 LMI DATA REVIEWS.

The Contractor must present LMI data for review at Technical Interchange Meetings (TIMs), program management reviews and logistics meetings.

C.3.5.5.2 LMI/PROVISIONING GUIDANCE CONFERENCE CDRL L017: CDLS Parts List and Data Item Description

The Contractor must host and support PGC as specified in the LMI Data Products. The conference must be held at the contractor's facility, unless otherwise specified by the Government. The Contractor must ensure the participation of knowledgeable contractor/subcontractor personnel. A provisioning conference must be held not later than 30 days after contract award, and Government receipt of the LMI data.

The purpose for the PGC is to review and refine the Contractor's Recommended Spares Parts List (RSPL) delivered as a part of the Contractor's proposal. The conference will also serve as a venue to ensure contractor understanding of the logistics requirements specified in this contract. The Government will prepare the agenda for the conference. The Contractor's RSPL must include all critical parts that will

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take longer than 72 hours for shipment to an STS site after issuance of a parts requisition. The specific lead time for these items must be included in the RSPL or subsequent parts list.

At the provisioning conference the Contractor will make available for review technical data for the purpose of determining or identifying critical parts for designation as Priority (P1) items. Such technical data must include but not necessarily be limited to equipment drawings, specifications, performance data (historical and/or estimated) to include Mean-Time-Between-Failure (MTBF), Mean-Time-To-Repair, MTTR), Availability and Reliability data, along with Original Equipment Manufacturer (OEM) cross-reference documents.

During the provisioning conference, the Contractor must ensure the following:

- a. Make available to the Government all Government approved drawings (e.g., approved during a physical configuration audit), both proprietary and non-proprietary, for the Government to use as references. The Government will not copy or remove any proprietary data from the contractor's facility.
- b. Have copies of the Government approved Functional Configuration Audit/Physical Configuration Audit (FCA/PCA) documentation available for use as a reference.
- c. Make samples of systems, assemblies, and parts listed in the approved Parts Master File (PMF) available for examination for the duration of the conference.
- d. Furnish technically knowledgeable personnel to disassemble the equipment to the extent required by the Government, and such tools as may be needed for disassembly/reassembly.
- e. Must provide facilities, e.g., office space, conference room, access to telephone/facsimile, etc., for the Government provisioning team and contractor personnel. The number of Government participants in the provisioning conference will be provided to the Contractor prior to the conference.
- f. Ensure the participation of contractor personnel with detailed knowledge of the subject matter they represent, e.g., provisioning, provisioning technical documentation, hardware/software maintenance, engineering and system design, etc.

At any time during the term of this contract or any extension thereof, the Government reserves the right to order additional provisioning conferences and the updates to LMI data that will be required to support the provisioning conference.

As a result of the provisioning guidance conference the Contractor must ensure the availability of an after-market source of recommended spare parts and any recommended support equipment at the OEM/vendor's national distribution sites.

The Contractor must provide a top-down hardware breakdown structure to the LRU level on all hardware. The Contractor must update the breakdown structure during the PGC. After the PGC, the Contractor

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must deliver the Final Breakdown Structure to the Government for approval in accordance with **CDRL L017: CDLS Parts List and Data Item Description**.

C.3.5.5.3 DEPOT SPARES

After the provisioning conference, the Government may order depot spares as required. The Contractor must package and ship the depot spares to the contract depot and FAA facilities.

C.3.5.5.4 CATALOGING

The Contractor must provide the information used for the screening of the Defense Logistics Information Service (DLIS) for National Stock Numbers (NSNs) entered into the LMI database (Item Identification). The Contractor must provide the information used for the screening of the DLIS for NSN entered into the LMI database (Item Identification).

Information may not be more than 60 days old from date of delivery. Screening results must be documented in the LMI Data Worksheet Data Table and must not be more than 60 days old when the LMI data is delivered. With Government approval, the Contractor may use a current personal computer-based parts list/software program for this requirement.

After completing DLIS screening, the Contractor must provide (contract option) data required by the Government for Item Identification for items not cataloged.

Items identified as proprietary must be clearly marked and identified as PROPRIETARY.

C.3.5.6 OPERATING PROCEDURES

The outlined operating procedures were designed to make the requisitioning process as transparent as possible to field operating offices. Whenever possible, standard requisitioning procedures must be used.

Standard LIS (on-line) requisitioning procedures augmented with FAALC 24-hour priority desk telephone service (Customer Care Center 1-888-322-9824) will be used. Field requirements received by the FAALC will be processed direct to the Contractor via the FAALC's Web-based LIS interface CDLS Web.

All field requirements for support must contain the item part number, item description, and serial number (when applicable) on failed units. The 'Application To' (APP-TO) description must be included in the appropriate field when ordering items on LIS or through the priority desk. When shipment is desired to a facility other than the Supply Support Code designation, this should be so indicated. Identification of IM number on the requisition will expedite the processing of requisitions for non-cataloged items.

Requisition for non-cataloged parts will be processed in the same manner as for parts that can be identified by a National Stock Number. A part number that has three or more non-cataloged requisitions must be evaluated for possible cataloging. For additional information, contact the FAALC IM.

Notifications of requisition status, including cancellations or items for repair and return (R&R), will be provided to the requisitioner by the IM via LIS.

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Repairable units on all exchange and repair (E&R) transactions will be returned directly to the Contractor. The Contractor will provide return authorization documents for each shipment. The Contractor will track the return of the repairable items and advise the IM of non-receipt. Note: Return of repairable items must be shipped by traceable means and accomplished within 15 working days after receipt of the serviceable items. The Contractor must provide the FAA Inventory Manager with a list of failed LRUs not returned to the Contractor's facility within 30 days after shipment of serviceable asset. This list must include transaction tracking number (TTN), supply support code (SSC), national stock number (NSN)/part number and point of contact (POC). The FAALC IM will then contact the field POC to ascertain disposition of asset.

In the event that the Web-based application is temporarily unavailable and an urgent need for shipment of an asset exists, the requisition may be identified to the Contractor by the FAA Logistics Center (FAALC) IM via telephone contact (numbers to be provided at the Logistics Guidance Conference), and fax of a FAA Form 4650-12 (Material Requisition/Issue Receipt). The document will include a tracking number. Shipment is not authorized until the Contractor has received a fax or an electronic transmittal of the requisition from the FAALC IM.

C.3.5.7 DOCUMENTATION

C.3.5.7.1. COMMERCIAL & TECHNICAL DOCUMENTATION CDRL L018: Commercial Support Documentation

- 1) The Contractor must provide, with each Static Transfer Switch, one copy of the applicable Installation and Operations manual(s) and other such applicable hardware, software and firmware documentation. The Government must have full and complete rights to all system software, system hardware, system firmware and all supporting documentation. The Contractor must furnish to the Government any hardware, software or firmware necessary to alter or modify the "application" software. The "executable" source code must be furnished. The executable code must be properly annotated and commented.
- 2) The Government must have the right to reproduce, copy, alter, use, modify, all data, documentation, software, hardware and firmware. The Government agrees to maintain this data in a reasonable secure manner and agrees not to divulge the data to any competitors. The manufacturer must be required to license the Government to use all applicable software.
- 3) When requested, the Contractor must provide the Government copies of all documentation (current version as of the delivery date and as defined in paragraph 10.2 of Data Item Description (DID) DI-FAA CSD-L008 for the vendor's Product as listed in Schedule B of this contract. This delivery must constitute the Documentation Baseline for the vendor Product Line. After delivery of the above baseline set, the Contractor

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must deliver updates in accordance with the Contractor's normal update process and schedule.

- 4) The Contractor must provide commercial technical instruction books to support system trouble-shooting and site maintenance in order to maintain the STS and associated equipment. The STS instruction books must include a level of detail on the equipment and their interaction to provide a thorough understanding of all STS and associated equipment and its functions. The level of detail must enable the technician to identify the failure as an equipment failure and will enable the technician to isolate the failure to the Lowest Replaceable Unit (LRU). The documentation must be delivered as defined in **CDRL L010: Commercial Support Documentation**. The documentation must consist of, at a minimum, the documentation listed below:

- a. Operator manuals
- b. Special support equipment documentation
- c. Maintenance manuals
- d. Technical Instruction Books
- e. Supplemental Technical data sheets
- f. Repair Parts Supply Documentation
- g. Field Service Bulletins

C.3.5.7.2. POINT OF CONTACT

The Contractor must specify an individual who must serve as a point of contact for all technical instruction book issues.

C.3.5.7.3. NEW TECHNOLOGY AND COMMERCIAL & TECHNICAL

The Contractor must offer equipment with new technology, new capabilities or improved performance to the Government within six (6) months of its being commercial availability. The Government may, at its option, choose to modify the contract to include this equipment. If component/equipment changes are accepted by the FAA, all Commercial Technical Documentation, as defined in paragraph 3.5.7.1, above, for the new equipment, must be furnished to the Government prior to the delivery of the new equipment. The Contractor's Service Representatives must be fully trained on the new equipment, and Start-Up procedures for the new equipment must be furnished prior to the delivery of the equipment to the Government. All materials provided to the Government must be free of all encumbrances, to include any prohibition on reproduction or use by the FAA for official Government purposes.

NOTE: Training documentation requirements are addressed in paragraph 3.6.4.6

C.3.6 TRAINING AND TRAINING SUPPORT

C.3.6.1.INTRODUCTION

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This section documents the FAA's requirements for STS Training. The Contractor must provide a factory training facility with ability to train on all STS and associated equipment purchased under the contract, which supports the following FAA maintenance concept.

FAA Maintenance Concept. FAA technicians will perform all of the tasks that the Contractor's Customer Service Engineer or Field Service Representative performs during an assistance visit to a customer's site. Tasks must include, but are not limited to, inspection of equipment, troubleshoot/diagnosis, removal of failed parts/LRU(s), replacement of failed parts/LRU(s) and validation and certification (if applicable) that the system is operational and available for operation.

Training courses required under this contract that must support the FAA's maintenance concept are:

- **Equipment Factory Training on STS Units.**
FAA technicians will perform all of the tasks that the equipment Contractor's Customer Service Engineer or Field Service Representative performs during an assistance visit to a customer site(s). Tasks must include, but are not limited to, procedures and schedules for programming, setting of relay, startup, shutdown, troubleshooting, servicing and preventive maintenance of all equipment, inspection of equipment, troubleshoot/diagnosis to fault, removal of failed parts/LRU(s), replacement of failed parts/LRU(s) and validation and certification (if applicable) that the system is operational and available for operation, and operation and maintenance.
- **Equipment On-Site Training on Operational STS Units**
This training is conducted at the FAA's facility using the FAA's power system equipment. Training must include operator training for the STS with limited LRU replacement instruction. This training course is an abbreviated version of the factory-training course.

C.3.6.2.GENERAL TRAINING INFORMATION

C.3.6.2.1.ENVIRONMENTAL OCCUPATIONAL SAFETY AND HEALTH (EOSH)

All COTS training material developed, revised, or used by the Contractor must meet or exceed the appropriate Occupational Safety and Health Administration (OSHA) regulations (see OSHA 29 CFR 1910.305). OSHA Safety Regulations must also be integrated into course content, as appropriate. All instruction must emphasize each person's accident prevention responsibilities, both as an individual and as a representative of the FAA.

C.3.6.2.2.COURSE REQUIREMENTS

The Contractor must provide and conduct STS training as ordered under this contract. The Contractor must adhere to the requirements of FAA-STD-028C, "Contract Training Programs and the Airway Facilities Standards and Guidelines for Course Development"; FAA Order 3000.57, "Air Traffic Organization Technical Operations training and Personnel Certification Programs", and AMAWI-00002, "FAA Academy Training Development and Revision". The contractor will be provided MS Word soft copies of FAA STD-028C, FAA Order 3000.57 and AMAWI-00002.

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The Contractor must revise and maintain all course materials, curriculum materials and courseware, if required, until all Contractor-conducted training has been completed. The Contractor must deliver final training documents and materials in hard copy form and on electronic media files in the latest version of Microsoft Word 2003 and/or Microsoft PowerPoint 2003 or later format.

The lecture and laboratory training must meet the following requirements.

- Formats for training materials must be submitted by the Contractor to the Government for approval prior to use.
- Training must be based on a Task and Skills Analysis (TASA) with cognitive and performance objectives directly derived from the TASA.
- Training must be provided as follows: 50% lecture, 50% laboratory.
- Training materials must be based on the system/equipment technical instruction book(s).
- Training course materials must include an instructor manual and an instructor laboratory guide with detailed lesson plans for consistent training, a student manual and a laboratory manual with performance exercises to enable students to practice the skills being taught.
- On completion of the training, each student must be able to perform all preventive maintenance, as well as identify, isolate, and correct faults to the LRU level (corrective maintenance). In addition, the training must enable the students to understand the functional capabilities and operational concepts of the equipment/system.
- Each course objective must be thoroughly tested in written and/or graded lab practical examinations.
- Exams are written, multiple-choice, and performance exams (laboratory). For written exams, each objective must have three different versions of each exam item of equal difficulty. The number of test items must be sufficient to adequately measure student mastery of all the objectives. Exams must be such that a student achieving a 70 percent score possesses the requisite knowledge of the equipment/system.
- Written end-of-course evaluations will be provided by the FAA. All students must be given the opportunity to complete written end-of-course evaluations.

C.3.6.3. TRAINING MATERIALS AND EQUIPMENT

C.3.6.3.1. STUDENT TRAINING MATERIALS

The Contractor must provide each student with a complete a set of course materials for the respective course. Course conduct must make maximum use of all materials distributed. Student manuals and guides will encompass a “how to” approach and work in concert with the instructor materials (lesson plans, PowerPoint presentations, figures, handouts, etc.). The Contractor must furnish and maintain all reference, instruction and student materials for each class. At the conclusion of each class, students will retain all student course materials issued to them.

C.3.6.3.2. COPYRIGHTED MATERIAL

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All COTS or developed training material must be free from all encumbrances, which prohibit or limit their reproduction or use by the Government for training purposes. These encumbrances must include, but not be limited to, copyrighted materials, registered documentation, and software. At final delivery, the Contractor must provide written verification that the above requirements have been met. All material developed for the FAA must be the sole property of the FAA and must not be used by the Contractor for any purpose other than as stated in the contract.

C.3.6.3.3. CONTRACTOR-FURNISHED TRAINING SUPPLIES

The Contractor must furnish all training supplies (insulated and non-insulated hand tools, interconnect cables, acid-resistant grease, lifting devices, etc.), test equipment, safety/protective gear (face shields, goggles, eye wash stations, aprons, gloves, etc.) necessary to conduct training. The Contractor must maintain all supplies and safety/protective gear in a usable condition.

C.3.6.3.4. CONTRACTOR-FURNISHED TRAINING SITE(S) AND FACILITIES

The FAA must approve in advance all training sites; all training must be conducted at an approved site. All training must be conducted at the Contractor's facility except for On-Site training. The FAA may inspect any training sites and/or facilities furnished by the Contractor during the contract period. The following conditions will be appraised and must be approved: space, lighting, noise, heating and cooling, safety of environment, cleanliness and sanitation, furniture, and handicap accessibility. The Contractor must correct any known deficiencies identified before the start of training. The Contractor must provide training aids such as chalkboards, overhead projectors, viewgraphs, Static Transfer Switch, automatic transfer switch, battery systems, etc., as identified in training documentation.

C.3.6.4 TRAINING DEVELOPMENT

C.3.6.4.1. PERSONNEL QUALIFICATIONS REPORT CDRL T-1-1: Personnel Qualifications

Report

The contractor must submit a resume of training experience for each person assigned to develop coursework and/or conduct classes under this contract. Each resume must include the name of organizations where the person developed and/or conducted training, points of contact at the organizations including phone numbers, address and training dates.

The Contractor must submit a personnel qualifications report for the training staff in accordance with FAA-STD-028C, DID-1. Data Item Description, DID-1, Paragraph 2. "Instructional Development Staff" requirement is waived.

C.3.6.4.2 TASK AND SKILLS ANALYSIS REPORT CDRL T-1-2: Task and Skills Analysis (TASA)

Report

Specific requirements for the reports are listed in FAA Standard 028C, DID-2. A TASA Report must be prepared for the second level engineering and maintenance Technician Training Course.

C.3.6.4.3 TRAINING SCHEDULE

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The Contracting Officer will advise the Contractor of the first course at least 60 days prior to the required date, upon coordination with the Program Office and the Technical Operations Training Division, Workforce Development.

The training must be conducted on an 8-hour academic day, five days per week schedule, unless course length dictates otherwise. Course instruction, labs, and testing must be included in this time frame. Class instruction periods for lecture will be 50 minutes in duration with a 10-minute break between periods of instruction. The length of the practical application (laboratory exercises) must vary as the subject matter dictates.

Start and end times for classes conducted at FAA field locations may vary to accommodate work schedules for FAA personnel.

Class must not be held on Federal holidays. Federal holidays must not be absorbed into the overall course length. No training must be scheduled between Thanksgiving and New Year's Day. The Government must establish class start and stop times and class days.

Maximum class size is 8 students of FAA technicians, engineers and/or supervisors, per class. The student-to-instructor ratio may be no greater than 10-to-1 for classroom training, and no greater than 4-to-1 for lab training. The number of STS units and associated equipment available for lab exercises will determine the final class size. Additional instructors may be needed while students are performing their lab exercises.

To meet urgent installation and/or fielding requirements, the Government may direct the Contractor to conduct a second shift or an accelerated training schedule. If so directed, the Contractor must conduct training to accomplish all instructional activities while maximizing use of the STS and equipment.

The Contractor must conduct a minimum of 10 classes with additional classes purchased as needed after the successful completion of the Operational Tryout and the First Course Conduct.

C.3.6.4.4.WRITTEN EXAM, MULTIPLE CHOICE, DEVELOPMENT CDRL T-1-7: Tests, Written and Performance.

Develop three versions for the STS course. Administer these exams to the FAA course evaluators at end of the Contractor's presentation of the STS course. Once approved by the Government these exams will be used at factory training course and FAA Academy training course. Specific requirements for the reports are listed in FAA Standard 028C, DID-7.

C.3.6.4.5.PERFORMANCE EXAM (LABORATORY) DEVELOPMENT CDRL T009 T-1-7: Tests, Written and Performance

Develop three versions for the STS course. Administer these exams to the FAA course evaluators at end of Contractor's presentation of the STS training course. Once approved by the Government these exams will be used at factory training course and FAA academy training course. Specific requirements for the reports are listed in FAA Standard 028C, DID-7.

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C.3.6.4.6.DEVELOPMENT OF TRAINING MATERIALS

If training is to be developed or existing factory training COTS training course is to be modified or tailored to the FAA needs, the Government must designate from the following list those deliverables that must be submitted for review and approval. The deliverables will be in accordance with FAA-STD-028C, Airway Facilities Standards and Guidelines for Course Development the applicable DIDs, FAA Order 3000.57, Air Traffic Organization Technical Operation Training and Personnel Certification Programs and AMAWI-00002, Academy Training Development and Revision.

- **CDRL T-1-5 Training Development Plan**
- **CDRL T-1-6 Course Design Guide**
- **CDRL T-1-8 Classroom Training Materials**

C.3.6.4.7.STUDENT WELCOME PACKAGES CDRL T001: Student Welcome Packages

The Contractor must provide each student with a Student Welcome Package containing, at a minimum:

- Specific directions to the training facility
- Class dates and times
- A list of housing, dining, and transportation facilities available in the vicinity of the training facility
- The content and methods to be used in the training
- A description of the course contents.

This information must be provided to the FAA Contracting Officer's Technical Representative (COTR) in electronic format at least six weeks prior to the scheduled first class of the course as required in FAA-STD-028C, paragraph 2-14.

C.3.6.4.8.VALIDATION OF TRAINING COURSES

During the Contractor's Presentation, Operational Tryout and First Course Conduct, the Contractor will conduct or present versions of each fully developed lesson to the FAA. The lesson is given in enough detail and depth so that the FAA can assess the effectiveness of the instructional materials, learning sequence, performance exercises, etc. A Contractor's Presentation progressing up to First Course Conduct must be conducted for the Second Level Engineering and Maintenance Technicians for all STS and associated equipment purchased under this contract. During the Operational Tryout and First Course Conduct, the Government must review the evaluation forms and identify necessary changes to training materials. The Contractor must incorporate the revisions. At subsequent course conducts, the Contractor must distribute the designated evaluation forms to the students and forward to the FAA as directed.

C.3.6.4.8.1 CONTRACTOR'S PRESENTATION CDRL T-1-14: Contractor's Presentation

The Contractor's Presentation is a formal step in the validation of the training materials in accordance with FAA-STD-028C, DID-14. During the presentation, the Contractor must present a shortened version of each fully developed draft lesson, including draft test items. Each lesson must be given in enough

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detail and depth that the integration and effectiveness of the instructional materials, learning sequence, performance exercise, tests, and time allocations, can be fully assessed by the Government.

The Contractor's Presentation must be conducted at the Contractor's facility using materials that will be used in the actual training course. Contractor personnel responsible for the design, development, and technical accuracy of the training materials must be available during the presentation to answer questions about the course. Additionally, if the Government requests their presence, the Contractor must require additional Contractor personnel to include instructor(s), developer(s), and appropriate subject matter experts, available to answer questions during and after the presentation. Government representatives must be as identified by the Government.

The Contractor must correct errors, omissions and deficiencies in student and instructor materials discovered during the Contractor's Presentation and must submit corrected copies of the course materials for Government review and approval. The Contractor must also ensure that all copies requiring correction are corrected prior to their use in any class. If the Contractor's presentation is determined to be unsatisfactory by the Government, a second presentation will be required.

C.3.6.4.8.2 OPERATION TRYOUT CRDL T-1-15: Operational Tryout

The Operational Tryout is a continuation of the training materials validation process conducted in accordance with FAA-STD-028C, DID-15. Completed draft lessons are presented to representatives of the target population to determine if the instructional approach is appropriate and effective, test items and time allocations are appropriate, and the format of the materials is easy to use. Information obtained from the Operational Tryout is to be used to revise and improve the instructional effectiveness of the materials prior to the First Course Conduct.

The Operational Tryout must be conducted at the Contractor's facility and must be planned to last one and a half times the length of the proposed course. Government representatives selected as monitors must not count against the class enrollment. The Contractor must correct errors, omissions and deficiencies discovered during the Operational Tryout and resubmit materials as directed by the contract. Subsequent classes must not commence until a successful Operational Tryout has been conducted and is approved by the Government.

The Contractor must submit an Operational Tryout Report upon completion of the Operational Tryout. The Operational Tryout must not count against the number of classes to be conducted by the Contractor.

C.3.6.4.8.3 FIRST COURSE CONDUCT CRDL T-1-16: First Course Conduct

The Contractor must provide the First Course Conduct in its entirety in the intended training environment to the target population to ensure the course accomplishes the objectives established in accordance with FAA-STD-028C, DID-16. The Contractor must submit a First Course Conduct report upon completion of the First Course Conduct class.

Course approval must be contingent upon Government acceptance of the First Course Conduct Report. The First Course Conduct class must not count against the number of classes to be conducted by the Contractor.

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C.3.6.4.9. TRAINING DELIVERABLES

Materials deliverable to the Government upon completion of factory training course.

C.3.6.4.9.1. DELIVERY OF END-OF-COURSE EVALUATIONS **CDRL T002: Delivery of End-of-Course Evaluations**

The FAA will provide the Contractor with written end-of-course evaluations for distribution to the students. All students must be given the opportunity to complete written end-of-course evaluations. These forms may include, but not be limited to, student lesson critiques, time logs, errata sheets, end-of-course critiques, etc.

C.3.6.4.9.2. DELIVERY OF END-OF-COURSE EXAMINATIONS **CDRL T002: Delivery of End-of-Course Evaluations**

Following each course completion compile the FAA students' names and record his or her score on each exam, indicating whether the student passed or failed. This is submitted to the Government.

C.3.6.4.9.3. CERTIFICATE OF TRAINING

The Contractor must deliver a certificate of training to each student who successfully completes the training. The certificate must contain, as a minimum:

- Student name
- Length of training, in hours
- Course number and title
- Location of training
- Date completed
- Issuing official.

C.3.6.5. TRAINING CONFERENCES/MEETINGS

C.3.6.5.1. POST-AWARD TRAINING CONFERENCE **CDRL T003: Post-Award Training Conference Report**

The purpose of the conference is to provide details on and clarification to the training requirements set forth in this SOW and to:

- Establish a liaison and working relationship between the Contractor personnel and FAA training representatives
- Permit inspection of the Contractor's training facility
- Discuss the proposed course development methods and the requirements associated with each deliverable required from the Contractor
- Discuss the Contractor's plan for accomplishing the training
- Discuss the Contractor's Personnel Qualification Report
- Discuss classroom administration requirements.

C.3.6.5.2. IN-PROGRESS REVIEWS (IPR)

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The Contractor must conduct IPRs meetings. The IPRs are formal presentations by the Contractor to the Government concerning the progress that has been made on the training development or delivery effort to date. The Government must schedule the IPRs as needed.